

REMARKS

Applicant appreciates the Examiner's thorough examination of the subject application and requests reconsideration of the subject application based on the foregoing amendments and the following remarks.

Claims 1-26 are pending in the subject application.

Claims 1-26 stand rejected under 35 U.S.C. §102 and/ or 35 U.S.C. §103. Claim 18 was objected to for an identified informality.

Claims 1 and 14 were amended for clarity.

Claim 18 was amended as suggested by the Examiner. In this regard, Applicant would note that its file copy of the as-filed application had a superscript 2 following the expression identified by the Examiner. Applicant, however, has proceeded on assumption that the as-filed application either was missing the superscript or that during handling the superscript mark became obscured. Thus, Applicant has asserted herein that claim 18 is amended as suggested by the Examiner. The amendments to the claims are supported by the originally filed disclosure.

35 U.S.C. §102 REJECTIONS

The Examiner rejected claims 1, 2, 4-8, 13, 14, 15, and 17-21 under 35 U.S.C. §102(b) as being anticipated by Parulski et al. [USP 5,493,335; "Parulski"]. Applicant respectfully traverses as discussed below. Because claims were amended in the instant amendment, the following discussion refers to the language of the amended claims. However, only those amended features

specifically relied upon to distinguish the claimed invention from the cited prior art shall be considered as being made to overcome the cited reference.

Applicant claims, claim 1, a color solid-state imaging apparatus that includes a plurality of pixel devices provided in a plane; a Bayer array color filter which includes first through third color filter segments and which is provided over the plurality of pixel devices, each of the first through third color filter segments corresponding to a respective one of the plurality of pixel devices; and a read pixel position selecting section. The read pixel position selecting section selects read pixel positions such that in two directions crossing each other, a first pixel pair of horizontally-adjacent pixels corresponding to a first color filter segment and one of a second color filter segment and a third color filter segment and a second pixel pair of vertically-adjacent pixels corresponding to a first color filter segment and the one or the other one of a second color filter segment and a third color filter segment are provided so as to alternate with each other. Also, there are $(N-1)$ pairs of unselected pixels (N is a positive integer) between the alternate first and second pixel pairs. For purposes of clarity, claim 1 was amended to indicate that the pixels of the first pixel pair and the pixels of the second pixel pair are different.

Applicant respectfully disagrees with the assertion that Parulski describes a read pixel position selecting section of the present invention, which selects read pixel positions such that in two directions crossing each other, a first pixel pair of horizontally-adjacent pixels corresponding to a first color filter segment and one of a second color filter segment and a third color filter segment and a second pixel pair of vertically-adjacent pixels corresponding to a first color filter segment and the one or the other one of a second color filter segment and a third color filter

segment are provided so as to alternate with each other. There is no mention anywhere in Parulski of the pixel pairs as set forth in the claims and further that such pixel pairs are provided so as to alternate with each other. This is rather clear if one compares the pixels that are circled in Fig. 2 of the subject application, which is one depiction of the claimed limitation, with figure 4 in Parulski.

As provided in col. 6, lines 4-22 of Parulski, in order to form the low-resolution images, a suitable "subsampling" pattern is required. It is further provided in Parulski that one subsampling pattern is illustrated in figure 4, where a circle is surrounding each sampled pixel. It is clear from figure 4, that the sampling being described in Parulski is not that where a read pixel position selecting section would select read pixel positions such that in two directions crossing each other, a first pixel pair of horizontally-adjacent pixels and a second pixel pair of vertically-adjacent pixels are provided so as to alternate with each other.

At best, what Parulski depicts in a few occurrences in figure 4 are sample pixels that form an L or corner shaped arrangement. This clearly is not an alternating arrangement as claimed by Applicant.

Notwithstanding the foregoing remarks and in the interests of advancing prosecution, Applicant has amended claim 1 so as to indicate that there are no in common pixels between the first and second pixel pairs.

As to claims 2, 4-8 and 13, these claims each depend from claim 1, which claim as indicated above is considered to be in allowable form. As such at least because of the dependency from a base claim that is considered to be allowable, each of claims 2, 4-8 and 13 are

considered to be allowable. The foregoing shall not be construed as an admission by Applicant that claims 2, 4-8 and 13 are not other wise patentably distinct in view of Parulski.

Applicant also respectfully submits that the foregoing comments distinguishing claim 1 from Parulski also apply to distinguish the color solid-state imaging apparatus of claim 14 from Parulski. As to claims 15 and 17-21, these claims each depend from claim 14, which claim as indicated above is considered to be in allowable form. As such at least because of the dependency from a base claim that is considered to be allowable, each of claims 15 and 17-21 are considered to be allowable. The foregoing shall not be construed as an admission by Applicant that claims 14, 15 and 17-21 are not other wise patentably distinct in view of Parulski from the remarks directed to claim 1.

As provided in MPEP-2131, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegel Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Or stated another way, "The identical invention must be shown in as complete detail as is contained in the ... claims. *Richardson v Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ 2d. 1913, 1920 (Fed. Cir. 1989). Although identify of terminology is not required, the elements must be arranged as required by the claim. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990). It is clear from the foregoing remarks that the above identified claims are not anticipated by Parulski.

In deciding the issue of anticipation, the trier of fact must identify the elements of the claims, determine their meaning in light of the specification and prosecution history, and identify *corresponding elements* disclosed in the allegedly anticipating reference (emphasis added, citations

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in support omitted). *Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Company et al.*, 730 F. 2d 1452, 221 USPQ 481,485 (Fed. Cir. 1984). In concluding that the '770 Patent did not anticipate the claims, the Federal Circuit in *Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Company et al.*, at 221 USPQ 485-486, further provides that:

The '770 patent discloses an entirely different device,
composed of parts distinct from those of the claimed invention, and
operating in a different way to process different materials differently.
Thus, there is no possible question of anticipation by equivalents.
Citations omitted.

It is clear from the foregoing remarks, that the allegedly corresponding elements disclosed in Parulski do not in fact correspond to the elements of the claimed invention. It also is clear that the solid-state imaging apparatus described in Parulski functions and operates in a different manner from that of the claimed invention. Thus, there can be no disclosure or teaching in Parulski of Applicants' invention.

It is respectfully submitted that for the foregoing reasons, claims 1, 2, 4-8, 13, 14, 15, and 17-21 are patentable over the cited reference and satisfy the requirements of 35 U.S.C. §102(b). As such these claims, including the claims dependent therefrom are allowable.

35 U.S.C. §103 REJECTIONS

Claims 3, 9-12, 16 and 22-25 stand rejected under 35 U.S.C. §103 as being unpatentable over Parulski et al. [USP 5,493,335; "Parulski"] in view of Campbell [USP 6,657,755].

Applicant respectfully traverses as discussed below. Because claims were amended in the instant amendment, the following discussion refers to the language of the amended claims. However, only those amended features specifically relied upon to distinguish the claimed invention from the cited prior art shall be considered as being made to overcome the cited reference.

As to claims 3, 9-12, 16 and 22-25, these claims each depend respectively from either of claim 1 or claim 14, which claims as indicated above are considered to be in allowable form. As such at least because of the dependency from a base claim that is considered to be allowable, each of claims 3, 9-12, 16 and 22-25 are considered to be allowable. The foregoing shall not be construed as an admission by Applicant that claims 3, 9-12, 16 and 22-25 are not other wise patentably distinct in view of Parulski.

As to Campbell this reference is being cited for the limited assertion of allegedly teaching that the two directions that cross each other are two different diagonal directions. As such, it is also submitted that the secondary reference does not include any teaching nor suggestion to overcome the above-noted deficiencies in Parulski so as to yield the solid state imaging apparatuses of either of claims 1 or 14. It is further submitted that that the secondary reference does not include any teaching, suggestion nor offer any motivation t any to modify the apparatus disclosed in Parulski so as to yield the solid state imaging apparatuses of either of claims 1 or 14.

As to Campbell it is asserted that Campbell discloses reading the RGB pixels in two different diagonal directions and that the combination of Parulski and Campbell would yield an imaging apparatus as claimed by Applicant. Applicant respectfully disagree with the asserted teachings of Campbell.

Campbell teaches re-arranging the pixels so that the pixels at an angle of 45 degrees relative to the axis of the array and read out in a zig-zag fashion. Thus, what Campbell teaches is rotating the pixels so that they are at angle. As a consequence, when the pixels are read out they naturally follow a zig-zag pattern. Campbell does not teach nor suggest arranging the pixels so that they are not at an angle with respect to the axis of the array and then controlling the read-out process to read in the so-called zig-zag pattern.

As provided in MPEP 2143.01, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F. 2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F. 2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). As provided above, the references cited, alone or in combination, include no such teaching, suggestion or motivation.

Furthermore, and as provided in MPEP 2143.02, a prior art reference can be combined or modified to reject claims as obvious as long as there is a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Additionally, it also has been held that if the proposed modification or combination would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. Further, and as provided in MPEP-2143, the teaching or suggestion to make the claimed combination and the reasonable suggestion of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d

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488, 20 USPQ2d 1438 (Fed. Cir. 1991). As can be seen from the forgoing discussion regarding the disclosures of the cited references, there is no reasonable expectation of success provided in the reference or the admitted prior art. Also, it is clear from the foregoing discussion that the modification suggested by the Examiner would change the principle of operation of the imaginh apparatus disclosed in Parulski.

It is respectfully submitted that for the foregoing reasons, claims 3, 9-12, 16 and 22-25 are patentable over the cited reference(s) and thuds satisfy the requirements of 35 U.S.C. §103. As such, these claims are allowable.

CLAIM 18

As indicated above, claim 18 was objected to because of an identified informality.

As also indicated above, claim 18 in Applicant's file copy of the as-filed application included a superscript 2 following the expression identified by the Examiner. Applicants, however, have proceeded on assumption that the as-filed copy of the application was missing the superscript or that during handling the superscript became obscured. As such, Applicants has thus asserted herein that claim 18 was being amended as suggested by the Examiner. As such, claim 18 is considered to be in acceptable form.

It is respectfully submitted that the subject application is in a condition for allowance. Early and favorable action is requested.

Applicants believes that additional fees are not required for consideration of the within Response. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed

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for any excess fee paid, the Commissioner is hereby authorized and requested to charge Deposit
Account No. **04-1105**.

Respectfully submitted,
Edwards & Angell, LLP

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By:



William J. Daley, Jr.
(Reg. No. 35,487)
Edwards & Angell, LLP
P.O. Box 55874
Boston, MA 02205
(617) 439- 4444

Customer No. 21,874